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ABSTRACT

Noting that play is the natural medium in which children express themselves and develop motor, cognitive, and social skills, this qualitative study examined the contribution of symbolic play and technology-assisted play and the classroom environment to the literacy development of third graders. A literature review of play theory and play-related issues addressed the connection between play and literacy in the primary level classroom, and focused on the definitions of play, the importance of play for literacy development, the teacher's role, and the importance of the classroom environment. Participating in the study were 26 third-graders from 2 classes in a public primary school in an urban school district in New Jersey. Data were collected through classroom observations, questionnaires, and interviews with the two classroom teachers. Observations were conducted twice weekly during the homeroom and the computer lab periods. The observers noted how the teachers introduced the activity associated with the lesson, how students and teachers were engaged in the activity, and what behaviors the teachers and students exhibited. A technology-assisted program, Compass Learning, was used in the computer lab and allowed students to play computer games involving language arts skills. Findings revealed that although the teachers lacked understanding of symbolic play, there was evidence that children had opportunities for symbolic play. The weekly attendance in the computer lab was not normally preceded with any related activities. One teacher did use the district literacy arts curriculum guide to implement learning activities. Findings generated recommendations for the two teachers. (Three appendices contain data collection instruments.) (KB)

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RELATIONSHIP OF PLAY AND LITERACY

A Study of the Relationship between Symbolic and Technology Assisted Play in Literacy Development

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PS 030497

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Professor Dr. Ruth J. Palmer
Spring 2002

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Abstract

Play is the natural medium in which children express themselves and develop motor, cognitive, and social skills. The purpose of this paper is an attempt to examine the capacity of symbolic and technology assisted play and literacy development. This paper draws on a literature review of play theory and play related issues to address the connection between play and literacy in the primary level classroom. The study utilizes the qualitative research method to conduct the study and identifies the classroom environment, motivation and the role of the teacher as important aspects that foster the value of play and literacy.

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Running Head:

RELATIONSHIP OF PLAY AND LITERACY

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Symbolic and Technology Assisted Play in Literacy Development

Working in an urban school district has become increasingly and alarmingly more difficult. Educators are faced with daily situations that are beyond their control: decaying buildings, low salaries and working in buildings described as being located in unsafe neighborhoods. In despite of the blight, some educators feel they can help by teaching children in these school districts.

Recently local newspapers published standardized test results for each school within their serving area. The local newspaper revealed that the literacy scores for the school I teach in were amongst the lowest in the school district. These test results appeared to refute teacher beliefs that all children can learn, and the school districts expectation that students will demonstrate proficiency on the literacy components on standardized tests. In the eyes of educational researchers and child development theorists these scores probably stimulated their interest in discovering how the role of the teacher, classroom practices and student motivation contributes to literacy development in this school district. Although my students were not part of the test results, I began to reflect on the classroom practices of myself and my colleagues to identify teaching strategies we utilize with our students that contributes to their literacy skill development. My reflection revealed a common practice that the teachers in my school were keeping students so actively involved in academic tasks that it did not give the students opportunities to "play around". It is an expectation that if we have children working harder and longer they will be academically challenged and will acquire skills that will enable them to be successful. Some teachers describe this expectation as having students "on task". When teachers minimize opportunities for children to play and socialize it limits the

opportunities to express th m through play and verbal communication. I now wonder if this teacher practice of keeping students on task" and not giving opportunities to play stifles literacy development and student motivation. The lack of motivation to learn diminishes and impedes academic growth. Therefore, I would assume their impeded growth might contribute to poor test scores.

The purpose of this study is to look at symbolic play and technology assisted play and see how it contributes to the literacy development of third grade students. The school, in which the study was conducted in, normally assigns academic tasks to the children using independent pencil and paper activities, which limits any interaction between students. When the students are engaged in cooperative learning groups the activities are normally paced so it limits student interaction to the task at hand. Shortly, before this study commenced the school district adopted a technology-assisted program Compass Learning to the literacy curriculum. Compass Learning requires children to utilize computers and play games involving language arts skills. As a rule these children had opportunities to play during physical education class and during recess, but rarely during class time and never on the computer. I believe these play periods are vital to the well being of the student. This study will exam the classroom set up and teaching strategies and the technology assisted games to see if it promotes symbolic play and literacy development. It will require the researcher to observe how students engaged themselves in the classroom in literacy-developed activities. In addition, the study will review the relationship, if any, of how the classroom set up contributes to literacy development. Finally, this study will examine if symbolic and technology assisted play has any value in the academic setting by impacting on a student's motivation to learn.

The research questions proposed for this study include: (1) Does symbolic and technology assisted play increase language literacy? (2). Do classroom environments and their design encourage symbolic play and language development?

Definitions of Terms

In this study *symbolic play* is defined as when a child displays imagination and playfulness in activities initiated by the child themselves or adult generated. *Technology assisted play is* a computer program designed by Compass Learning that tells a story, demonstrates a theory or supports a given definition using graphics and sound and provides for student interaction. Literacy skills include speaking, listening, reading and writing. Although motivation is intrinsic in nature, for this study *motivation* is an overt behavior in which the student has a tendency to persist in literacy activities with little or no assistance.

The daily interactions of students in the classroom environment contribute to their language learning. Literacy develops at the same time as oral language. (Bodrova, E and Leong, D.J., 1996) Therefore one might assume that students in a literacy rich classroom with opportunities for technology and symbolic play would make connections between things they hear or see with what they read. Oral language encounters provide data for written language acquisition and vice versa. Play engages children in the process of an activity. They are not aware of the end product. However, teachers are aware of the intended end product and should structure the classroom setting and teaching activities that is developmentally appropriate, intellectually stimulating and socially adaptive.

The significance of this study will be in identifying how classrooms are set up, identifying symbolic and technology assisted play activities and how they appear to develop and enhance literacy development. It would also reveal teacher's attitudes toward play and how they facilitate play in their classrooms. Also the study might give some insights regarding the role of play amongst children from various ethnic, cultural and socio economic backgrounds. This study will provide more information in an area that appears to have a gap between current research and academic thinking about play and its relationship in the development of literacy acquisition. Perhaps this study in some way may influence the teacher training programs and how they present the role of play in child development courses.

Hopefully, the results and findings of such a study will increase the knowledge of the subject and change the beliefs and practices of classroom practitioners.

Review of Literature

Over the years play has shifted from children engaged in recess on the playground to the present time in which teachers are not encouraged to take students out to recess. Instead children are more apt to play during cooperative learning group activities utilizing manipulatives for the purpose of developing problem solving skills. Both situations could contribute to literacy development but recess is now perceived as a time waster. Many parents, teachers and administrators believe that time in school should be used for the academic subjects such as reading, writing and mathematics. They do not believe play in any form may be beneficial to a child's learning. This belief system is perpetuated even more when schools, such as mine, score below state standards. As a result school districts dictate more instructional time rather than playtime.

In the last twenty-eight years I have taught primary grades in an urban school district. As a first grade teacher I remember from my child development courses that the cognitive development of students at this age is crucial as well as their social development. I remember my college professor requiring us to read articles by Jean Piaget and Jerome Bruner. In retrospect I viewed those articles at that time as a perfunctory assignment rather than considering their substance. I imagine I was just excited to teach and Piaget's play theories did not absorb me until years later. My teaching experience has shown me kids want to play and learn. I thought this was a perfect time to revisit the role of play and language development, because I was enrolled in a graduate course in research. I want to utilize the evolving research that examines the instructional day and how it can be structured to accommodate play for literacy development. I am sure this is what good teaching is all about! The following literature review provides answers to the research question: (1) Do classroom environments; symbolic play and technology assisted play increase language literacy?

This literature review addresses the definitions of play, literacy development and how it relates to play, the classroom setting, and the role of the classroom teacher and the results of a study.

Definition of play

As stated in my introduction, many people think that conceptually play is a waste of time in the educational setting. Therefore, the definition of play is important and necessary when it addresses its role in literacy development. One must know how researchers interpret the meaning of play. Obviously their definition of play in the educational setting differs from that of some parents and educators. In educational research the term symbolic play is often used with younger children. According to Piaget symbolic play involves the use of symbols to represent experiences. In the paper, *From Play to Literacy: Implications for the Classroom by Sara Wilford's (2000),* her definition of play includes imaginative play, child initiated and adult facilitated experiences characterized by playfulness. Child's play is an activity that is self-directed, open-ended, free, spontaneous and most times creative and unique. Play is derived from a child's intrinsic motivation to understand his or her own needs. (Wilford, 2000) One of the meaningful contexts is symbolic play is defined as the children's abilities to transform themselves into people, and situations other than themselves (Johnson, Christie, &Yawkey, 1998). Friedrich Schiller (1954) advanced a groundbreaking theory of play and excellence. He wrote" without play humans could not possibly advance to their highest potential". According to him play is educative because it gives humans the necessary lightness for generating creative pursuits. Another type of play in the early years involves dramatic play. This play occurs when children adopt roles and use make -believe transformations to act out stories and themes. (James Christie, 1990)

Play and Literacy in the Classroom

The above definitions reveal that play can make an important contribution to children's early reading and writing development. Piaget stressed the importance of play in developing representational thought. Through play the child assimilates new information and consolidates it with past experience. Vygotsky theorized that play allows a child to exceed the bounds of the immediate

stimulus and thus to learn to use symbolic, abstract levels of thought. Christie and Johnson (1983) have shown that free-play activities are valuable in promoting cognitive development generally, and literacy development in particular. More recent researchers such as Pei-Yu Chang, PHD and Dr. Thomas D. Yawkey, (1998) focus on the analysis of the characteristics of symbolic play and as it relates with early literacy. The writers pointed out that according to Isberg and Jacob (1983) literacy is enhanced through the process and the content of children's symbolic play. They referenced the research works of Piaget, Fein, Wolfgang and Sanders in regards to involving the use of symbols in symbolic play. A symbol is something, which stands for something else that is absent from the situation. (Horn, Nomrot, Scales & Alward, 1993) Authors Chang and Pei contend both "symbols" (Piaget) and "signs" (Wolfang and Sanders) are made of representational use in play and literacy. They give as an example: Children play different roles in various situations in a dramatic play. In literacy they used the example of writing poems and stories. Consequently, they assert that both symbolic play and literacy share the required element of representational competence. A new literacy involves computer technology by playing games commonly designed with layers of complexity. The author Norman (1988) states that in computer games feedback can be easily provided in order for the learner to quickly evaluate their progress against the established game goal. The feedback can take the forms such as textual. visual and aural. The learner is made aware whether or not their intended action resulted in the expected outcome. (Norman 1988,1993) Researchers Mackinlay and Shneidman (1999), support the claim that computer technology contributes to students content area learning. However, no significant research supports this new literacy of computer play for early literacy learning. They say to better understand the role of computer-assisted play in literacy learning, we need to study how computer graphics function in relation to text.

Wilford (2000) outlines five distinct literary goals that can be attained by supporting children's natural inclination towards playful endeavors. They are as follows: Goal 1 is the development of symbolic processes as they relate to literacy learning. Goal 2 is the fostering of language growth semantically and contextually. Goal 3 is the ability to problem solve in a

meaningful, creative context. Goal 4 is the motivation or disposition to persist in literacy activities. Ms. Wilford states that without intrinsic motivation this goal is useless. Goal 5 is the joyful engagement we desire for our children as they enter all aspects of literacy: speaking, listening, reading and writing. According to Wilford (2000), symbolic play and literacy provide meaningful interrelations.

Teacher Role

An additional focus was on providing appropriate materials and teacher's roles for the nurturing of the literacy process. Chang and Yawkey (1998) addressed fostering literacy and symbolic play utilizing materials, and defining the teacher's role. The teacher's role for the play environment is to provide various types of literacy objects and routines to enrich children's literate behavior through play. (Berg1994). Vukelich (1990) recommends that teachers serve as children's models in using literacy and pretend play materials. Chang and Yawkey state the teacher, as an encourager is another critical role in this process. Teacher encouragement is critical to literacy and pretend play. A teacher simply observing and watching children is encouraging in itself. Teachers are facilitators and models of children's literacy and pretend play development. Chang and Yawkey speak about the teacher in the role of an encourager and model in pretend play sessions with children. The teacher's role is extremely important in guiding and modeling literacy behavior that children can emulate (Morrow, 1990; Schrader, in press: Vygotsky, 1978).

Classrooms that Promote Play and Literacy

The role of a classroom's physical environment in learning is typically over looked. Most educators' focus on pedagogy, content, and interpersonal dynamics, giving little formal consideration in the physical contexts in which teaching and learning occurs. (Morrow & Rand, in press) Recent studies indicate that manipulating classroom environments can yield developmental dividends, especially when it encourages and supports the kind of play the psychologists and educators generally

agree as a young child's primary avenue to learning and development. In preparing the environment it is the teachers role to make the classroom environment kid friendly for literacy and pretend play. (Berg, 1994) In literacy context, teachers should label all objects in the classroom.

Wilford (2000) notes specific aspects of early childhood classrooms that support the value of play and literacy. She identifies themes the following: Aspect 1 is a classroom structure that includes a flexible schedule and sufficient inviting materials to allow opportunities for imaginative play and literacy development. Aspect 2 implies literacy growth by utilizing songs, rhymes, books, with a designated area for dramas and to play with graphic and written symbols.
Aspect 3 suggests a curriculum that is relevant to children's interests and developmental stages and rich in problem solving opportunities. Aspect 4 addresses the importance of creating a climate of persistence. Aspect 5 celebrates the centrality of story in human lives and the joy that is possible when we as teachers understand that all aspects of literacy learning can come together as a celebration of our mutual stories.

According to Morrow and Rand (1991) play in an ideal setting, allows the young child to practice, elaborate, and extends emergent literacy abilities. The teacher's role is extremely important in guiding and modeling literacy behavior that children can emulate (Morrow, 1990; Schrader, in press: Vygotsky, 1978).

Careful attention to the physical arrangement of a classroom and the selection materials is essential to instructional success. Including reading and writing materials in dramatic play areas can increase the type and quantity of voluntary literacy behaviors among children (Rilvlin & Weinstein, 1984; Weinstein, 1977). Literacy, learning and pretend play are facilitated in natural environments with sufficient literate materials and opportunities to play. Vygotsky (1967) notes that through the manipulation of objects, children's representational capacity expands since they use them as tools to gain meanings. Neuman and Roskos (1990) found that supplying familiar literacy objects to children increase the amount of time and persistence using them. Providing pencils, note pads, telephone directories, etc. can encourage children to incorporate these literacy materials into their dramatic play.

In this regard classroom materials and teacher roles with children are significant determiners of children's learning. (Chang andYawkey 1998)

Research in early chiidhood classroom environments has addressed spatial arrangements, types of materials, and the various uses of centers. Field (1980) found that partitioning a room facilitated peer and verbal interaction as well as fantasy, associative, and cooperative play. Nash (1981) and Moore (1986) discovered that children in classrooms where space was intentionally organized produced more creative art and written products and used more and complex oral language or poorly defined settings. Morrow and Weinstein (1986) and Morrow (1987) found that teachers could increase children's voluntary use of literacy materials simply by designing visible, accessible, attractive literacy or library corner. Dodge and Frost (1986) and Woodward (1984) introduced thematic play materials into dramatic play areas and found that children began to involve themselves in more elaborate and longer play sequences. Pellegrini (1983) found that placing dramatic props in the block center elicited more imaginative language than did the presence of blocks alone.

A study of the effects of manipulating the environment on literacy behaviors

A study was undertaken to evaluate the effects that environmental changes and patterns of teacher guidance had on children's literary behaviors. (Morrow, 1990) The study was designed to determine if environmental changes and teacher behaviors would lead to an increase in the number of spontaneous literacy behaviors (e.g., book browsing, pretend reading, tracing, writing, paper sorting) demonstrated by young children during classroom free-play periods. The study divided the subjects in the following groups: 1.Paper pencils and books with adult guidance group

Teachers in this group introduced various literacy-related materials into both the block and dramatic play areas 2.Thematic material with adult guidance group. In this group, the dramatic play areas were designed to represent veterinarians' offices. 3.Thematic materials without adult guidance group. In this group, the dramatic play area was set up identically to the thematic materials with adult guidance treatment. 4.Traditional-curriculum control group. Teachers in the control group made no changes at

all in dramatic play areas, nor did they suggest any literacy behaviors that youngsters could try during play.

A statistical analysis was used to determine if there were differences among the groups in the average number of children who participated in literacy behaviors during free-play periods. Results for the first data collection period revealed that the number of children who participated in literacy behaviors, demonstrated by children in the paper, pencil, books with adult guidance group and the thematic play with adult guidance group, were significantly greater than the number of behaviors demonstrated by children in either the thematic play without adult guidance group or the control group.

Morrow and Rand (1990) concluded that modifications in the physical design of a classroom could have an important impact of young children's literacy behaviors. They referenced the dramatic play area as a place in which children will engage in literacy activities, when it includes literacy materials. When selecting theme play areas, they suggest choosing situations familiar to all children (e.g. fast food restaurant, supermarket, gas station, etc.). In looking at specific literacy behaviors, the children in the pencil, paper, and books with adult guidance group engaged in more use or simulation of writing activities (drawing, scribbling, copying, and writing) than the other groups. Children in the thematic materials with adult guidance treatment engaged in more reading activities than other groups.

From these results Morrow (1990) concluded that preschool and kindergarten children are likely to engage in more voluntary literacy behaviors during play periods when literacy materials are introduced and teachers guide children to use those materials. The physical classroom changes combined with teacher guidance in the use of literacy materials did encourage at least one-fourth of the children to voluntarily select those materials for play. This led to the assertion by the authors that perhaps more children would have participated if the materials were present throughout the entire school year. (Morrow1990)

Recommendations of the researchers

Results of the project on which the findings of this article were based, as well as other similar research efforts, point to some general guidelines for stimulating literacy during play: 1. Reading and writing materials, which are incorporated into children's thematic play activities, are likely to generate functional and practical emerging literacy behaviors.2. Materials should be kept in clearly marked and defined containers, so that they are accessible and easily put away.3. Teachers should suggest uses for materials, model literacy behaviors, and change materials periodically to keep the interest level high.4. All levels of development should be accepted, and reading or writing attempts should be recognized as legitimate literacy behaviors.

5. Observational anecdotes of literacy and examples of attempted writing can be kept to aid in assessment (Morrow, 1989; Schickedanz, 1986). 6. Teachers in Grades 1 to 3 might consider this type of play activity valuable in developing literacy skills for the children they teach. (Morrow1990)

This literature review focuses upon play as a vehicle for developing literacy in young children. Theoretical and empirical research suggests that engaging children in symbolic play while incorporating literacy content into such play can have a positive influence on early literacy development. The classroom environment must include literacy provoking materials along with technology assistance, in a carefully planned physical setting, as an avenue to facilitative learning and development.

Teachers must take note. Play is more than "just play." Knowledge of the role of play behavior in the classroom is a must. Play is the way children learn when, as educators, we are unable to teach and reach them. Contemporary society and educational discourse considers human learning to be a non playful process as people have come to accept that gaining knowledge can only be the result of hard labor. Contrary to this dominant learned culture of great effort and toil in playfulness and enjoyment can and should be an integral part of the learning process. The new literacy involving technology-assisted games is introducing that playfulness. Wilford's paper tied literacy goals and the aspects of childhood classrooms to the literacy success of young students. Keeping the goals in mind

she turned to aspects of early childhood classrooms where play is valued and literacy fostered. She made some connections between these literacy goals and specific aspects of early childhood classrooms. Educators must realize that the play setting serves many functions and the selection of materials used in the play setting should be functional to children's real life. They must incorporate well designed and thought out play opportunities, including computer technology games, within the context of the instructional day.

This review also reveals that in order to ensure literacy, schools must have more than motivated students and trained teachers. Wilford (2000) asserts a climate that promotes feeling good about yourself, being recognized for who you are and what you can do has powerful effects on the persistence and motivation so crucial to academic achievement. She spoke about intrinsic interest and the disposition to persist amongst these students. Wilford describes it," as the fuel that feeds a lifelong thirst for literacy and can be seen in children's play with their sounds of language". Intrinsic motivation on the part of the learner and a well-defined teacher's role facilitate the learning process.

Wilford states, "acknowledging the literacy implications in children's play should be seen as supportive of the acquisition of literacy skill, rather than in the opposition of literacy skill. " (Wilford2000)

I found great interest on the motivational perspective that was briefly addressed. In my opinion, the teacher role facilitates the intrinsic motivation of children, in addition to encouraging them. This role is a powerful learning tool for young children. In addition to the power of teacher motivation, I was spellbound by Morrow and Rand's research on the classroom environments. As a teacher I have taken great strives to make my classroom conducive to learning. It was no surprise to me when this article indicated that the design of classroom environments could positively influence literacy development.

Those in doubt about the continuing connections between play and literacy might be inspired if they observe the enthusiasm of elementary youngsters that build with blocks and then draw, write and paint representations of their ideas as a vehicle to express their thoughts. Bruner (Christie, 1991)

asserts, "it is not so much instruction in either language or thinking that permits the child to develop his powerful combination skills but a decent opportunity to play around with his language and to play around with his thinking that does the trick."

Population

The participants identified for this study come from one of the thirty-three schools located in a large urban school district in the state of New Jersey. This school district is the recipient of designated funds from the state and federal levels due to the low socio economic conditions of the city. In addition, this district has been mandated by the state to have each school adopt a Whole School Reform model that will facilitate improved instruction and thus raise test scores. African Americans and Hispanics basically populate each school in the district. However, the diversity is expanding with other groups in certain areas of the city. Those racial groups include Caucasians, Laotians, Vietnamese and Haitians.

The school in which the subjects attend has an enrollment of two hundred students. The grade levels consist of preschool to third grade, including special education classes. In response to the state mandate this school adopted Comer as their whole school reform model. This model basically addresses the social and physical needs of students with no formalized instructional component. This school has been identified as a low performing school due to low standardized test scores. In addition, this building has been identified to close due to poor facilities.

Sampling

The participants targeted for this study are from two third grade classes consisting of thirty-three students. The actual sample group studied consists of twenty-six students. One of the two classes consists of thirteen students. The classroom racial background is six African Americans and seven Hispanics. The age range is eight to ten years old. The gender background is seven girls and six boys. The other classroom consists of thirteen students. The classroom racial background is ten African Americans and three Hispanics. The age range is eight to ten years old. The gender background is six girls and seven boys. All of the subjects are English speaking in both classrooms.

The participants selected for this study is a non-random sampling. Non-random sampling does not allow the subjects to have an equal chance of being selected. The type of non-random sampling utilized was a convenience sample. A convenience sample is any group or individual that is conveniently available to be studied. The participates were selected because they were available for both the pre and post testing sessions, based on their attendance on the test day. The advantage of selecting convenience sampling is that it is simply convenient for the researcher to undertake when they are selecting the participants. The disadvantage of convenience sampling is that the researcher bias may surface during the course of the study. (Fraenkel 2000)

Methods

This study used the research method of Qualitative Research. Qualitative Research involves obtaining a holistic picture of what goes on in a particular situation or setting. This method investigates the quality of relationships, activities, situations and materials. This study used the form of ethnographic research. The emphasis of this type of research is on documenting or portraying the everyday experiences of individuals by observing and interviewing them. The advantage of this research method is the natural setting is the direct source of data and the researcher is the key instrument. The disadvantage of this research method is that there is no way for the researcher to be totally objective about what s/he observes. (Fraenkel 2000)

Observations

The study was conducted over an entire marking period, which is estimated to be about forty-two days over a six-week time span. The study was conducted through classroom observations, a questionnaire and an informal interview of the two teachers. The researcher observed each classroom two times a week in two different settings. One setting is the computer lab and the other setting is the homeroom classroom. In class 101 the researcher would normally move from group to group as the teacher assigned different activities for each group. In class 102 the researcher most often remained stationary at a table, as the teacher lectured. Each visit lasted at least thirty to forty minutes. After the

initial explanation why the researcher was there, the children and the teacher continued their daily schedule.

During the classroom observations the researcher was not involved in any way with the delivery of the subject matter, but often was engaged in a conversation initiated by the students. The researcher was seated in close proximity to the subjects so that she could hear and see the subjects during the observation. During the classroom observations the researcher recorded how the teacher introduced the activity associated with the lesson, how the students and teacher were engaged in the activity and what behaviors the teacher and students exhibited.

The school computer labs were used to provide technology-assisted instruction utilizing computer programs, in literary arts skills, designed by Compass Learning. Both teachers were trained in Compass Learning on the instructional component but not in software and program problems. All lessons were designed and programmed in the computers by Compass Learning technicians. The lessons designed at the third grade academic level. The activities varied according to the literacy skill and if the student did not achieve the 85% proficiency level the program automatically repeated until the student achieved the proficiency level.

Prior to the observation and interview the teachers were asked to complete a written questionnaire that addressed their classroom beliefs and practices toward play. (Appendix A) The researcher informally interviewed the teacher from a variety of perspectives in order to gather data for the research questions that address classroom environments and their design. The interview included questions about the teacher's attitudes and definition of play.

The researcher's protocol for the classroom observation centered on the research question of does the classroom environment and their design encourages play and language development. The researcher sought the availability of literacy activities that promoted symbolic play and how the teacher was involved in the activities. The researcher wanted to note any behaviors and attitudes that the teacher displayed towards symbolic play with her classroom practices. In order to ascertain data on how the

classroom was set up to promote play and literacy opportunities, the researcher utilized a checklist to inventory the room. (Appendix C)

. During the observation the researcher attempted to note interactions that occurred between teacher and children during any type of activity that fostered play during literacy activities. The observer attempted to note how the teacher encouraged or discouraged children's symbolic and/or technology assisted play during literacy activities.

Data Management Plan

Quantitative data in this study was derived from the student scores of a pre and posttest designed by Compass Learning. The student completed the programmed test on a computer and the results automatically became part of the database. The results were generated into raw scores which was converted to a percentile rank for each student and class To further understand and interpret this pre and post scores quantitative data, this study results are displayed in a two frequency polygon graph. The horizontal axis places the students and the vertical axis places the scores. One frequency line indicates the pretest scores. The second frequency line indicates the posttest scores. (Frankel 2000)

Limitations of Study

This study was conducted with the full knowledge and permission of the school district. However, the school principal never gave any support to the researcher. The researcher believes the teacher's attitudes were impacted by the non-supportive action of the principal, and were reluctant to share their beliefs and classroom practices about play in a formalized interview. As a result the researcher abandoned her original one on one dialogue.

A student questionnaire was not administered because the researcher was not available to interview each student. Basically, the students would have circled yes and no responses to statements about their attitudes about play. The questions are included, in the event this study is replicated (Appendix B)

Findings

Teacher Questionnaire (Appendix A)

Prior to the observation and interview the two third grade teachers were asked to complete a written questionnaire that addressed their classroom beliefs and practices toward play. On question 1 both teachers answered no in regards to engaging their students in symbolic play daily. On question 2 both teachers answered they were aware of different types of play children are engaged in a school setting. On question 3 both teachers answered yes regarding technology assisted play for their students at least sixty minutes a week. On question 4 both teachers indicated no to reading articles on the role of play in the classroom. On question 5 both teachers answered no to having a classroom that encourages playfulness.

Classroom Inventory Checklist Appendix C

The researcher visited the classroom without the teacher and students present to conduct a visual inventory of the classroom. In Class 101 there were areas and tables in which there was evidence of leaning centers, a listening center and a library corner. The top of a bookcase was utilized to store pencils, paper, markers and crayons. The bulletin boards displayed student work and the walls were covered with mostly commercially prepared charts on various subjects. The student desks were in groups of four or five in close proximity to the chalkboard. In Class 102 there were tables with desks scattered about. It was a library corner with a rug and a small hutch with books. One table had games placed on them. Another table and bookshelf contained student books and materials. There were very few visual learning aids hanging on the walls. The bulletin boards contained papers of student work. Neither classroom showed evidence of magazines or props for dramatic play.

Informal Interview

When speaking to the third grade teachers about symbolic play activities in the classroom the teachers most often referred to physical education activities, board and card games, as symbolic play

activities. When the researcher gave them examples of symbolic play activities, both teachers acknowledged that they implemented activities such as creative writing and dramatic play as a follow up to reading selections. The third grade teachers acknowledged that the technology-assisted activities in the Compass-Learning program were fun and meaningful to the students. Both agreed that outside the district literacy program and the Compass Learning program they probably would not be focused on designing activities that encouraged too many symbolic play opportunities. The teachers indicated that the new district initiative LightSpan would be more play oriented for the students than Compass Learning. LightSpan designed literary arts games on CD-Rom's for the computer PlayStation called Game Boy. Both teachers expected to implement the program by sending these games home with the students with follow up in the classroom.

The Class 101 teacher said she wanted her children to have physical education daily in order for them to release the stress of the day. She felt this revitalized them for the rest of the subjects that had to be taught when they returned. She pointed out that when the students worked in groups this lent itself to socialization and interaction amongst each other. She felt that even if they were " off task", she did not interfere because it was the way they worked as a group. Her response centered around the teacher guide activities when asked about her efforts to structure play opportunities in the e classroom that encouraged speaking, writing and dramatic play.

The Class 102 teacher aware that play was essential in child development and allowed her students to play daily in the classroom. It was her opinion this was a way to reward students when they acted appropriately and this gave them a break from the daily routine in the classroom. The researcher inquired about her efforts to structure play opportunities in the classroom, that encouraged creativity and dramatic play, her response was that the current curriculum addressed that need and made reference to her Jeopardy activity as a game format to review class work.

Classroom Observations

In Classroom 101 the teacher normally engaged the students in cooperative learning groups, after she introduced her lesson. Each heterogeneous group was given a different task to complete. The task normally involved some type of manipulative that was given to them or was located in a learning center. Each person in the group was assigned a role as a recorder, spokesperperson, timekeeper, supplies person or helper. The teacher gave directions for the task as listed in the teacher's guide. During the activity the students would prepare their project together. Some students expressed their frustration, if they did not understand. The other students assisted those students and sometimes ended up doing their work. Basically, the students discussed what they were doing with each other. The teacher had to constantly remind the students to lower their voices while they were working. The teacher monitored each group as they worked and provided feedback to each group. After the group project was completed, the finished product was presented. This was normally presented in a written format but sometimes it involved the students in an oral presentation, drawing a picture or presenting a model. This format was normally followed in reading, social studies and science lessons in which the researcher was able to observe. The teacher referred to the teacher's guide for directions and follow up activities. The learning centers consisted of mostly commercially prepared learning aides. The science area had toy models of machines and animals. The math area contained a scale, liquid containers and a box of manipulatives from the district math program. The reading center consisted of a small library of books, sentence builders, matching games and some stuff animals. When children were finished with their work they were encouraged to take out their journals and write or get a game from the centers. In Class 102 the teacher primarily lectured from the front of the classroom. The lessons were taken from the teacher guides in reading and math. The students were placed in cooperative learning groups based on their ability levels. After the introduction of the lesson, the students were assigned skill book pages from the district reading series. Skills were normally verbally presented and reviewed with a written assignment on the board. The higher-level group worked independently, the middle group normally was assisted by the teacher and the bottom group worked

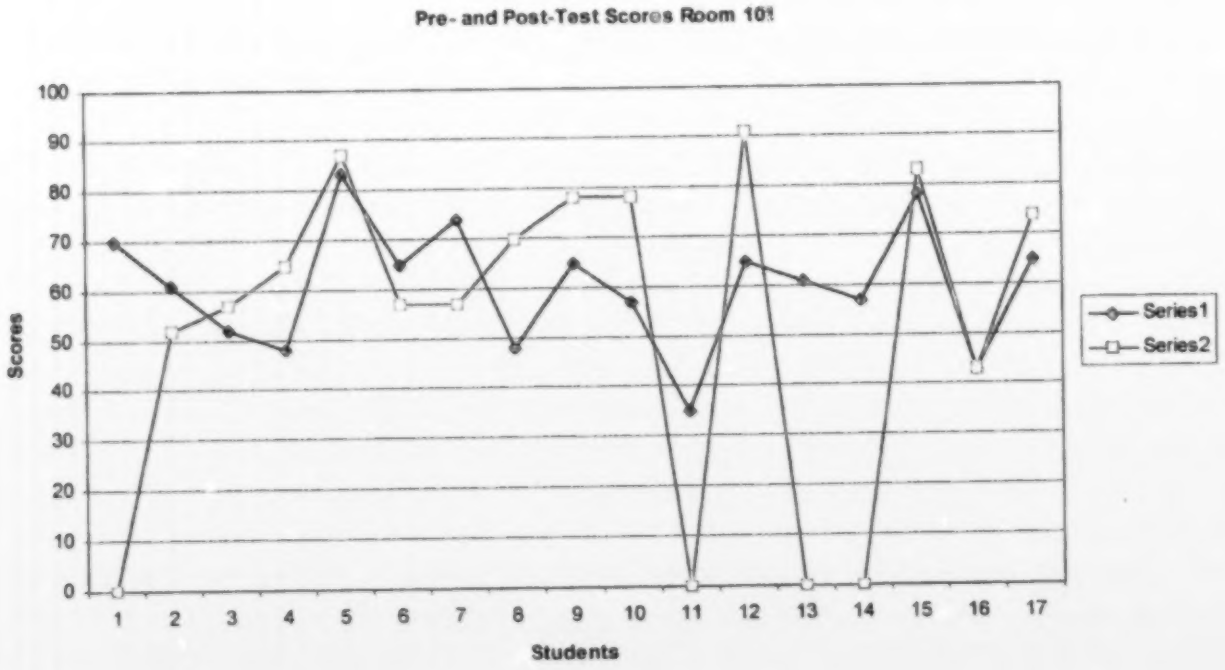
independently or with an instructional assistant, if available. The teacher encouraged the students to stay on task but they often distracted by several other students who were unable to do their work or by the ones that successfully completed their work. On several occasions the researcher notice there were not sufficient supplies of books, paper and pencils for each student. There was a noticeable reading corner, but not with a sufficient number of books. There was also a table of board games consisting of commercial games such as Sorry, Checkers and Parcheesi. The teacher encouraged students to get a game when they finished their work.

Technology Assisted Learning (Compass Learning Lab)

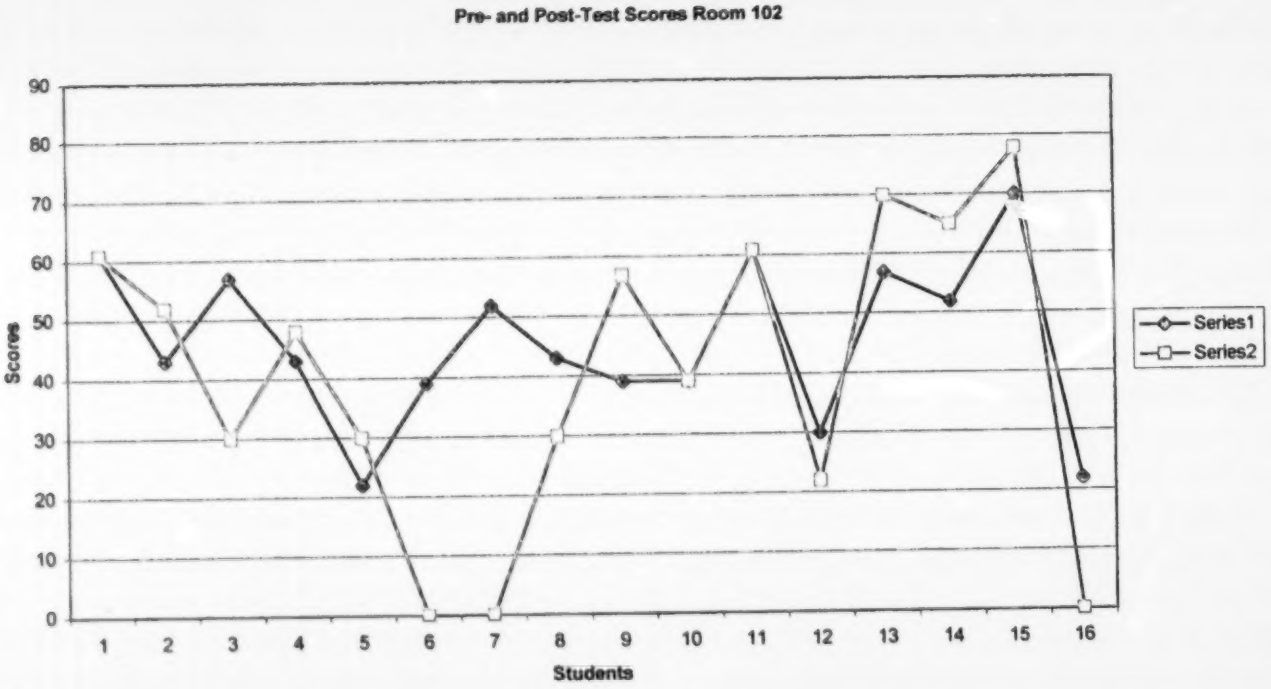
The school computer lab was downloaded with a specially designed program for the two third grade classes. The program was designed by Compass Learning. At their scheduled time forty-five minute period, the third grade students engaged in literacy skills instruction utilizing the computer. The Compass Learning program utilized colorful graphics, grade appropriate vocabulary and text, animation and sound to engage each child independently in game formatted activities. The games consisted in context clues, comprehension, phonics and language usage. The skills selected were aligned with the district literacy arts reading program and the core curriculum standards. The lessons provided immediate feedback to the students regarding their progress. T he activities are programmed in for each student who progress at their own pace. The students try to help each other, but are limited because most children are not on the same activity at the same time. The lessons provide immediate feedback to the student in a game formatted approach. Students can only advance to the next skill level when they have achieved a score of 85% or higher. Students express their frustrations when they cannot move to the next level. The teacher then provides some verbal assistance to the student. The teacher is only responsible for monitoring the students during this period.

Before the students engaged in the interactive lessons they had to complete a pretest. This was done at the beginning of the second marking period .The posttest was administered at the end of the second marking period. The marking period was about a forty- two-day span. The pre and posttest

involved no graphics, sounds or animation. The test had twenty-three test items consisting of comprehension, context clues, and phonics and language usage. The test was self paced and most students completed the test with in two separate forty-five minute periods. The final score of those sessions were not given to the student. The teacher had the ability to retrieve the scores from the Compass Learning database. The results are as follows in the graphs. The blue line indicates the pretest scores and the pink line indicates the posttest scores.



In Class 101 thirteen of the seventeen third grade student completed the pre and posttest. The pre test scores ranged from 35% to 83% with an average of 62%. The posttest scores ranged 43% to 91% with an average score of 69%. The difference between the pre and post scores was 7 %.



In Class 102 thirteen of the sixteen students completed the pre and posttest. The pre test scores ranged from 22 % to 70 % with an average of 47% and the posttest scores ranged 22% to 70% average score of 49%. The difference between the pre and post scores was 2 %.

Summary of Findings

The teacher interviews were informally conducted, however, their responses indicated that they had a different meaning of what symbolic play was as compared to this researchers definition. Conceptually, when describing play the teachers never used key terms from Piaget's definition such as "symbols", "experiences" or Christie's "make believe transformations". Therefore, the researcher believes that because of the lack of understanding of symbolic play the teachers therefore, made no conscious effort to incorporate symbolic play in literacy activities. However, once the researcher gave them examples of activities that encourage playfulness, creativity and transformations, the teachers

confirmed their students did engage in symbolic play when they implement suggested activities from the district adopted language literacy program. There was evidence that children did have opportunities to play but not always in a structured way. The students in Class 102 were often playing the commercial board games, but they did not generally contribute to cognitive development of the students. (Christie 1990) Although the school facilities were notably poor and outside the control of the teachers, it was evident that the class 101 teacher made attempts to provide a conducive setting for learning, through the use of table and wall displays. (Berg 1994) Her conscious efforts to establish cooperative learning groups gave an added dimension to enrich the student's literacy behavior. (Berg 1994) As she monitors the groups she answered questions and clarified their assignments. This modeling and guidance facilitated further learning and confidence in the students. (Vygotsky) The school had no music teacher and, therefore the researcher saw no evidence of opportunities for literacy growth utilizing music and action songs. (Wilford 2000) The researcher noted no distinct references or correlations to the Compass Learning lab identified literacy skills, in a planned sequence. The weekly attendance to the lab was not normally preceded with any correlated skills from Compass to classroom activities, until a week or two before the posttest was scheduled to be administered. The researcher believes that the lack or coordination of the skills between the lab and the classroom explains the low increase of the average test scores However, there was a higher increase in class 101 which supports the research question that the classroom environment and technology assisted play increase literacy development. The teacher in class 101 did influence the classroom environment and had a consistent encouraging effect on the students. Although limited opportunities existed for symbolic play, the teacher did utilize the district literacy arts curriculum guide to implement learning activities. The researcher assumes that the increased post test scores for both classes was directly related to the technology assisted play and symbolic play activities, regardless of how minimal they were. There was not a decline in scores.

Recommendations

The researcher recommends that the third grade teachers seek a clear definition of symbolic play from research articles. Using that definition then they should identify symbolic activities that are suggested in the curriculum materials and implement them in every lesson taught.

To better ensure that students are cognitively challenged, even in free play periods the researcher suggests that children be taught games like Scrabble, Checkers, Chess, Qizzmo, etc and purchase games that enhance literacy skills.

The two teachers should plan cooperatively and perhaps do some peer coaching to strengthen their knowledge of the subject matter and enhance their presentations during the delivery of the lesson.

To supplement the lack of music education, the teachers should utilize their curriculum guides to identify activities that encourage music theory and practice.

The researcher recommends that the third grade teachers gear instructional lessons and activities in their classroom in alignment with the skills and lessons they identified for the Compass Learning program.

It would be helpful if both teachers would enhance the learning centers with materials essential to instructional successes. Reading and writing materials and dramatic play areas increase the quality and quantity of literate behaviors. (Vygotsky 1967)

It recommended that this study be replicated again, including interviews with students, increasing the number of classroom observations and over several marking periods.

Implications

This study shows that the education of urban students is still at risk and inadequate. (Kozol) This school is located in the very school district in which Jonathan Kozol visited in the early nineties. He found in adequate supplies, unmotivated teachers and poor school leadership. The only difference

some ten years later is that the district was state mandated to comply with whole school reform initiatives. Unfortunately, the district is still plagued by low-test scores and poor facilities. Ironically, this study is being written at the same time the governor has announced a proposed state take over of the school district's local board of education. Hopefully, the educational system will improve and each student will be the recipient of a quality education.

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Appendix A Teacher Questionnaire

Circle the letter to the answer that best describes your classroom practice or experience.

1. My students are engaged in some type of symbolic play activity daily?

a.) Yes b.) No

2. I am aware of the different types of play children can be engaged in the school setting?

a.) Yes b.) No

3. The students in my class are engaged in technology assisted play activities that enhance literacy skills for more than 60 minutes.

a.) Yes b.) No

4. Since I have been a teacher I have read articles on the role of play in the classroom.

a.) Yes b.) No

5. My classroom encourages playfulness.

a.) Yes b.) No

Appendix B Student Questionnaire

Circle YES or NO

1.I like to play in school.	YES	NO
2. When I play I learn how to read better.	YES	NO
3. When I play I learn how to write better.	YES	NO
4.When I play I learn how to speak better.	YES	NO
6. My teacher lets me play in class.	YES	NO
7. You should never play in school	YES	NO

Appendix C Classroom Inventory Checklist

Physical Setting

_____ Partitioned Areas _____Sitting Area

_____Learning Centers

_____Library Corner

_____Block Center

_____Dramatic Play Area

_____Theme Play Area

Student Materials

____Pencils

____Paper

____Note Pads

____Books

____Magazines

____Crayons

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